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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/936,510	09/24/1997	YONG BEOM KIM	8733.20056	9825

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EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 04/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/936,510

Applicant(s)

KIM, YONG BEOM

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,14,16,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,14,16,20,20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

1. Currently claims 1, 4, 14, 16, 20 and 21 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 4, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimizu et al., (Yoshimizu), USPAT 5,249,071.**

4. Yoshimizu shows in Fig. 10, a liquid crystal display device comprising:
 - first and second substrates (3, 2);
 - an electrode (5) over the first substrate (3);
 - a liquid crystal layer (8) disposed interjacent the first and second substrates;
 - two uniaxial optical compensation films (11, 12) of a same type over the second substrate (2); and
 - a first alignment layer (7) over the first substrate (3).

Yoshimizu does not explicitly disclose that the electrode is reflective. However, it is common and known in the art to use reflective electrodes to obtain a reflective display. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display of Yoshimizu such that using a reflective electrode over the first substrate so that a reflective display is obtained.

Accordingly, claim 1 would have been obvious.

As to claim 14, since the method of manufacturing the device is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would have been obvious in view of the device.

As to claims 4 and 16, Yoshimizu discloses that the two uniaxial optical compensation films are positive type (col. 11, lines 50-52).

5. **Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimizu as applied to claims 1, 4, 14 and 16 above and in view of Sugiyama et al., (Sugiyama), PN 5,757,455.**

6. Yoshimizu does not explicitly disclose the limitation such as the alignment layer having a plurality of alignment directions over the first substrate. However, Sugiyama discloses a liquid crystal display device having good visual angle characteristics includes a first alignment film with a plurality of first alignment direction, where at least two of the plurality of first alignment directions are either perpendicular or parallel to one another (figure 6G), formed on the first substrates and a second alignment film with an alignment direction perpendicular to the first alignment direction formed on the second substrate (col. 1, lines 63-64; col. 2, lines 5-13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Yoshimizu such that employing a first alignment layer having a plurality of first alignment directions over the first substrate so that a display with good visual angle characteristics is obtained, as per the teachings of Sugiyama.

Sugiyama also discloses a method of manufacturing such device including a method of forming the alignment layer including rubbing or exposing number of times in accordance with the number of the alignment directions to polarize ultraviolet rays to form the alignment directions (column 4, lines 28-49, column 5, lines 26-28).

Accordingly, claims 20 and 21 would have been obvious.

Response to Amendment

7. It is acknowledged and appreciated that applicant have canceled claim 9 without prejudice.

Response to Arguments

8. Applicant's arguments regarding claims 1, 4, 14, 16, 20 and 21 are considered but not persuasive.

In response to applicant's argument that Yoshimizu discloses the use of two transparent electrodes and thus teaches away from using at least a reflective electrode and would make the device of Yoshimizu operative when the transparent electrode is replaced with a reflective electrode, it is respectfully pointed out to applicant that Yoshimizu does not preclude the use of reflective electrode and further it is notoriously well known in the art of liquid crystal to replace a transparent electrode with a reflective electrode to obtain a reflective display. Further, the invention of Yoshimizu is directed to mainly towards the use of positive and negative uniaxially oriented polymer films not to the use of transparent electrodes. Further, Yoshimizu nowhere in the specification discloses that his device would not work in a reflective mode. Therefore, the rejection was proper and thus maintained.

9. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

10. In response to applicant's argument that Sugiyama fails to cure the deficiencies of Yoshimizu and thus the examiner failed to establish a prima facie case of obviousness regarding claims 20 and 21, it is respectfully pointed out to applicant that Sugiyama discloses a liquid crystal display device having good visual angle characteristics includes a first alignment film with a plurality of first alignment direction, where at least two of the plurality of first alignment directions are either perpendicular or parallel to one another (figure 6G), formed on the first substrates and a second alignment film with an alignment direction perpendicular to the first alignment direction formed on the second substrate (col. 1, lines 63-64; col. 2, lines 5-13). Therefore, since both Yoshimizu and Sugiyama is related to a liquid crystal display device and the missing limitation that was not disclosed by Yoshimizu was suggested by Sugiyama one of ordinary skill in the art would have been motivated to use the teaching of Sugiyama to modify the device of Yoshimizu and thus prima facie case of obviousness was established. Therefore, the rejection was proper and thus maintained.

Note: Applicant was correct that only Yoshimizu was used to reject claims 1, 4, 14 and 16. Accordingly, the current rejection only uses Yoshimizu to reject claims 1, 4, 14 and 16. The rejection is not altered at all only the inadvertent error made by the examiner in the previous office action is corrected.

Conclusion

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

A handwritten signature in black ink, appearing to read "T. Chowdhury", with a long horizontal flourish extending to the right.

T. Chowdhury
Primary Examiner
Technology Center 2800

TRC
April 26, 2003